

REMARKS

The present Amendment is in response to the Examiner's Office Action mailed May 19, 2008. By this paper, claims 1, 10, 12, 16, 24, and 25 are amended, and no claims are added or cancelled. Claims 1-21 and 23-25 are now pending in view of the above amendments.

Reconsideration of the application is respectfully requested in view of the above amendments to the claims and the following remarks. For the Examiner's convenience and reference, Applicants' remarks are presented in the order in which the corresponding issues were raised in the Office Action.

I. GENERAL CONSIDERATIONS

A. Claim Amendments and/or Cancellations

With particular reference to the claim amendments, Applicants note that while claims 1, 10, 12, 16, 24, and 25 have been amended herein, such amendments have been made in the interest of expediting the allowance of this case. Notwithstanding, Applicants, may, on further consideration, determine that claims of broader scope than those now presented are supported. Accordingly, Applicants hereby reserve the right to file one or more continuing applications with claims broader in scope than the claims now presented.

Consistent with the points set forth above, Applicants submit that neither the claim amendments set forth herein, nor any other claim amendments, claim cancellations or statements advanced by the Applicants in this or any related case, constitute or should be construed as, an implicit or explicit surrender or disclaimer of claim scope with respect to the cited, or any other, references.

B. Remarks

Applicants respectfully note that the remarks herein do not constitute, nor are they intended to be, an exhaustive enumeration of the patentable distinctions between any cited references and the invention, example embodiments of which are set forth in the claims of this application. Rather, and in consideration of the fact that various factors make it impractical to enumerate all the patentable distinctions between the invention and the cited art, as well as the fact that the Applicants have broad discretion in terms of the identification and consideration of the base(s) upon which the claims distinguish over the cited references, the distinctions identified and discussed herein are presented solely by way of example. Consistent with the foregoing, the

discussion herein is not intended, and should not be construed, to prejudice or foreclose contemporaneous or future consideration by the Applicants, in this case or any other, of: additional or alternative distinctions between the invention and the cited references; and/or, the merits of additional or alternative arguments.

Applicants note as well that the remarks, or a lack of remarks, set forth herein are not intended to constitute, and should not be construed as, an acquiescence, on the part of the Applicants: as to the purported teachings or prior art status of the cited references; as to the characterization of the cited references advanced by the Examiner; or as to any other assertions, allegations or characterizations made by the Examiner at any time in this case. Applicants reserve the right to challenge the purported teachings and purported prior art status of the cited references at any appropriate time.

II. Allowed Subject Matter

The Examiner's allowance of claims 21 and 23 is appreciated. Applicants wish to thank the Examiner for the careful review and allowance of those claims.

The Applicants' submit the following comments concerning the Examiner's statements of reasons for the indication of allowable subject matter in the Office Action. Applicants agree with the Examiner that the claimed invention of claims 21 and 23 is patentable over the prior art, but respectfully disagrees with the Examiners statement of reasons for allowance as set forth in Office Action. Applicants submit that it is the claim as a whole, rather than any particular limitation, that makes each of the claims allowable. No single limitation should be construed as the reason for allowance of a claim because it is each of the elements of the claim that makes it allowable. Therefore, Applicants' do not concede that the reasons for allowable subject matter given by the Examiner are the only reasons that make, or would make, the claims allowable and do not make any admission or concession concerning the Examiner's statement in the Office Action.

III. PRIOR ART REJECTIONS

A. Rejection Under 35 U.S.C. §102(b)

The Office Action rejects claims 1, 8-10, 12, and 16 under 35 U.S.C. § 102(b) as being anticipated by *Hori* (United States Patent No. 5,615,034). Applicants respectfully note at the outset that a claim is anticipated under 35 U.S.C. § 102(a), (b), or (e) only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. Further, the identical invention must be shown in as complete detail as is contained in the claim. Finally, the elements must be arranged as required by the claim. *MPEP* § 2131. Applicants respectfully traverse the characterization of the Office Action for the reasons that will now be described.

1. Claims 1 and 8-10

As listed above, Applicants have amended claim 1 to recite:

a signal power source adapted to produce an outgoing physical layer signal for transmission across a physical link

an on transceiver high-speed data modulator that is coupled to the signal power source wherein the signal power source is configured to modulate the outgoing physical layer signal with a high-speed data signal received from the high-speed data modulator;

an out-of-band data modulator that is coupled to the signal power source wherein the signal power source is configured to modulate the outgoing physical layer signal in response to out-of-band data received from the out-of-band data modulator wherein modulation by the signal power source in response to the high-speed data and out-of-band data provided by the high-speed data modulator and out-of-band data modulator-produces a double modulated signal as the outgoing physical layer signal including high-speed data and out-of-band data; and

a controller configured to generate diagnostic information regarding the transceiver and to receive diagnostic information from a host device externally coupled to the transceiver over a standard bus, the controller further configured to provide the controller generated and host generated diagnostic information to the out-of-band modulator to be modulated as at least some of the out-of band data.

Support for this amendment can be found at least in the originally filed application at paragraphs [0040] – [0042] and [0061] – [0063] and Figures 1 and 5, for example.

In contrast, the Office Action has not shown that *Hori* teaches or suggests all of the newly added limitations of amended claim 1. For example, the Office Action on page 2 alleges that element 1 of Figure 1 of *Hori* corresponds to the modulator recited in amended claim 1. However, Figure 1 clearly shows that element 1 cannot be an on transceiver high-speed data modulator as recited in amended claim 1.

In addition, the Office Action has not shown that any controller of *Hori* is configured to generate information regarding the transceiver and to receive information from a host device externally coupled to the transceiver over a standard bus. Indeed, the Office Action does not specify which element of *Hori* corresponds to a host device.

Further, control signal C provided to alleged modulator 29 in Figure 1, is not “information from a host device” (i.e., via element 27 or any other element) as alleged in the Office Action. In fact, the information received via demodulator 27 is simply used by controller 28 to generate amplification degree control signal A_U . See *Hori*, Figure 1, col. 5, lines 21-30, and col. 7, lines 17-29.

Inasmuch as the Office Action has not established that that each and every element as set forth in amended claim 1 is found in *Hori*, that the identical invention is shown in *Hori* in as complete detail as is contained in amended claim 1, and because the Office Action has not shown that *Hori* discloses that the elements of amended claim 1 must be arranged as required by that claim, Applicants respectfully submit that the Office Action has not established that *Hori* anticipates amended claim 1. For at least the foregoing reasons, Applicants respectfully submit that the rejection of amended claim 1, as well as the rejection of corresponding dependent claims 8-10, should be withdrawn.

2. Claims 12 and 16

Claim 12, as amended, recites a method comprising, among other things, “receiving low speed data at [a] local optical transceiver from [a] host device via a second bidirectional interface; modulating, at the local optical transceiver, [a] data signal with out-of-band data including the low speed data.” Support for such amendment is found at least in paragraphs [0039] and [0061]-[0063] and Figures 1 and 5 of the originally filed specification.

In rejecting claim 12, the Examiner identified demodulator 48 (and by implication controller 49) as the claimed host device and identified optical interface 2 that includes electricity-light converter 23 and light-electricity converter 24 as the claimed local optical transceiver. *See Office Action*, pp. 2 and 3 (referencing *Hori* at Figure 1, reproduced below).

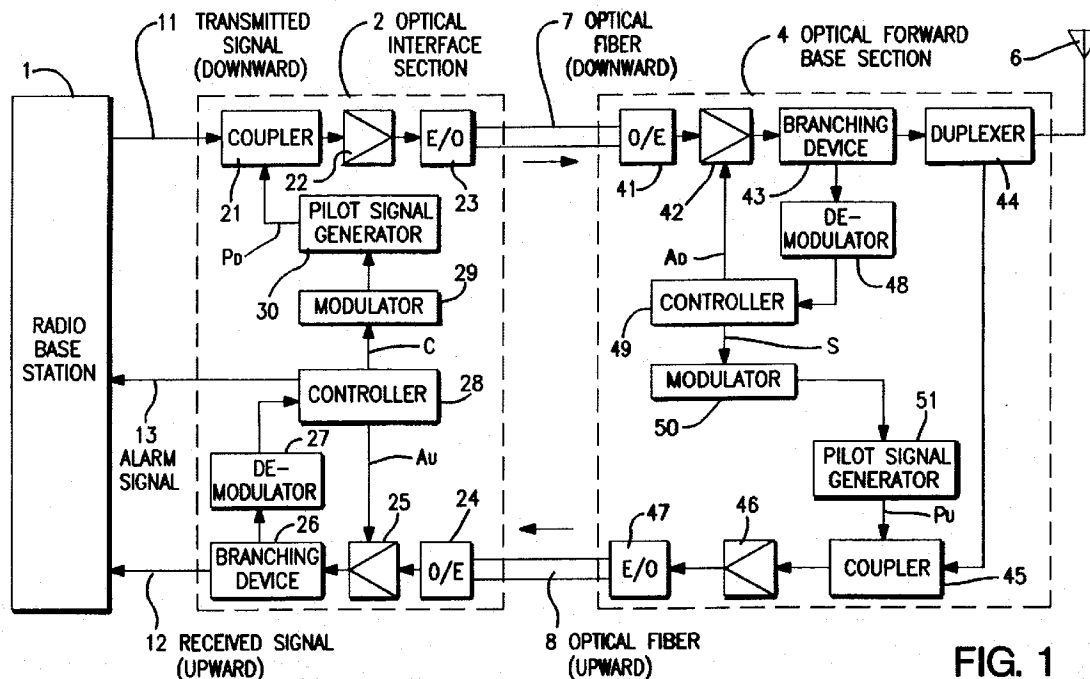


FIG. 1

Applicants respectfully submit, however, that although the light-electricity converter 24 may receive an upward pilot signal P_U from controller 49, *Hori* does not describe “modulating, at the local optical transceiver, [a] data signal with...the [upward pilot signal P_U],” as required by claim 1. Instead, the controller 28 of the optical interface section 2 uses the upward pilot signal P_U to generate an amplification degree control signal A_U in order to maintain “a constant amplification degree...even if the length of the optical fiber 7 or the amplification degree for each amplifier or converter is changed.” *See Hori*, col. 6, line 61, through col. 7, line 10.

In addition, element 48 cannot be a host device that is external to both the local transceiver and the remote transceiver as recited in amended claim 12 as element 48 is clearly part of forward base station 4, which the Office Action alleges is the remote optical transceiver.

Inasmuch as the Office Action has not established that that each and every element as set forth in amended claim 12 is found in *Hori*, that the identical invention is shown in *Hori* in as complete detail as is contained in amended claim 12, and because the Office Action has not shown that *Hori* discloses that the elements of amended claim 12 must be arranged as required by that claim, Applicants respectfully submit that the Office Action has not established that *Hori* anticipates amended claim 12. For at least the foregoing reasons, Applicants respectfully submit that the rejection of amended claim 12, as well as the rejection of corresponding dependent claim 16, should be withdrawn.

B. Rejection Under 35 U.S.C. § 103

The Examiner rejects claim 7 under 35 U.S.C. § 103 as being unpatentable over *Hori* in view of *Tsujikado* (U.S. Patent No. 6,091,738). The Examiner rejects claims 6, 11, and 20 under 35 U.S.C. § 103 as being unpatentable over *Hori*. The Examiner rejects claims 2-4, 13, 15, and 25 under 35 U.S.C. § 103 as being unpatentable over in view of *Varga* (U.S. Patent Application Publication No. 2005/0213621). The Examiner rejects claim 24 under 35 U.S.C. § 103 as being unpatentable over *Hori* in view of *Varga*, and further in view of *Bu-Abbud* (U.S. Patent No. 4,958,926). The Examiner rejects claim 5 under 35 U.S.C. § 103 as being unpatentable over *Hori* in view of *MacKinnon* (U.S. Patent No. 6,366,373). The Examiner rejects claim 14 under 35 U.S.C. § 103 as being unpatentable over in view of *Toshihisa* (U.S. Patent Application Publication No. 2004/0109696) or *Krick* (U.S. Patent No. 4,763,326). The Examiner rejects claim 18 under 35 U.S.C. § 103 as being unpatentable over *Hori* in view of *Fishman* (U.S. Patent No. 5,654,816). The Examiner rejects claims 17 and 19 under 35 U.S.C. § 103 as being unpatentable over *Hori* in view of *Yamazaki et al.* (Japanese Patent No. 57075042).

Claims 2-4, 5, 6, 7, 11 depend from amended independent claim 1 and claims 13, 14, 15, 17-20 depend from amended independent claim 12. If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988). Therefore, the Applicants respectfully request that the rejections of claims 2-7, 11, 13-15, and 17-20 be withdrawn for at least the same reasons as claims 1 and 12.

As shown above, independent claims 24 and 25 have been amended in a similar manner as independent claim 1. As discussed above in relation to claim 1, the Office Action has not shown that *Hori* teaches or suggests all of the limitations of independent claims 24 and 25.

Varga and *Bu-Abbud* do not teach the elements of claim 1 missing in *Hori* and are not cited by the Office Action as teaching such. Accordingly, the Office Action has failed to establish a *prima facie* case of obviousness with respect to claims 24 and 25 at least because even if the *Hori* device is combined with the alleged teachings of *Varga* and *Bu-Abbud* or otherwise modified in the purportedly obvious fashion advanced by the Office Action, the resulting combination fails to include all the limitations of the rejected claims. Applicants thus respectfully submit that the rejection of claims 24 and 25 should be withdrawn.

CONCLUSION

In view of the foregoing, Applicants believe the claims as amended or presently pending are in allowable form and that every issue raised by the Office Action has been addressed. In the event that the Examiner finds remaining impediment to a prompt allowance of this application that may be clarified through a telephone interview, or which may be overcome by an Examiner's Amendment, the Examiner is requested to contact the undersigned attorneys.

The Commissioner is hereby authorized to charge payment of any of the following fees that may be applicable to this communication, or credit any overpayment, to Deposit Account No. 23-3178: (1) any filing fees required under 37 CFR § 1.16; and/or (2) any patent application and reexamination processing fees under 37 CFR § 1.17.

Dated this 12th day of August, 2008.

Respectfully submitted,

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